WHAT IS THE LINK BETWEEN DISORDERED EATING AND BORDERLINE PERSONALITY DISORDER ACROSS ADOLESCENCE?

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BACKGROUND

- Eating disorders are serious mental illnesses that afflict approximately 2% of the population.
- Half of individuals with an eating disorder have a comorbid personality disorder, most often, borderline personality disorder (BPD).
- Eating disorders and BPD substantially increase the risk of further morbidity and early mortality.
- No study has examined which symptoms likely come first in cases of comorbidity. This has important implications for clinical practice.
- For the first time, we investigated the link between disordered eating and BPD using a rigorous methodological and analytical approach.

STUDY AIMS

1) Examine trajectories of disordered eating behaviour and BPD features over time.
2) Identify patterns of comorbidity.
3) Delineate temporal precedence.
4) Identify unique and shared childhood risk factors.
5) Calculate population attributable fractions for each modifiable risk factor.

METHOD

Participants

- Canadian cohort - McMaster Teen Study.
- Assessed yearly from age 11 (M*age*=10.91, SD=0.36).
- N=544 adolescents who had data at >1 time points between ages 14-18-years
- 56% girls; 76% white.

Measures

Disordered eating behaviour

- Short Screen for Eating Disorders (SSED).
- 12-items rated on a 5-point scale (0=never; 4=almost every day).
- Clinically significant behaviour
- Items averaged to create composites, with higher scores reflecting higher symptom severity (min-max α=0·75-0·82).

Borderline personality features

- Borderline Personality Features Scale for Children (BPFS-C).
- 24-items rated on a 5-point scale (0=not at all true, 4=always true).
- Items averaged to create composites, with higher scores reflecting higher symptom severity (min-max α=0·90-0·91).

Risk Factors

Risk factors were transformed into dichotomous variables to calculate odds ratios, relative risks, and population attributable fractions.

Sociodemographic. Biological sex (girl, boy), race/ethnicity (white, non-white), parent education (less than a Bachelor's degree, Bachelor's degree or above), household income (average ≥$70,000, below average <$70,000), sexual orientation (heterosexual, LGBTQ).

Interpersonal. Childhood bullying victimization, childhood bullying perpetration, childhood sexual abuse, childhood physical abuse. Exposure to bullying victimization or perpetration was classified if victimization or bullying others was reported at least once a month at any time between ages 11-13-years.

Child maltreatment was measured using the Childhood Experiences of Violence Questionnaire. Exposure was classified by any endorsement of the physical abuse items and/or the sexual abuse item.

Clinical. Most were examined using the BASC-2. Subscales on depression (12-items), generalized anxiety (10-items), hyperactivity (8-items), and somatization (7-items). Item raw scores were summed and transformed into standardized T-scores. Children with T-scores ≥60 at any time between ages 11-13-years were classified as exposed to clinically significant symptoms (clinical and subclinical symptom levels).

Impulsivity was measured by parent-report from age 11-13 using 3-items from the BCFPI. Items were measured on a 3-point scale and children with z-scores ≥1 at any time between ages 11-13-years were classified as exposed clinically significant symptoms of impulsivity.

RESULTS

1) Trajectories

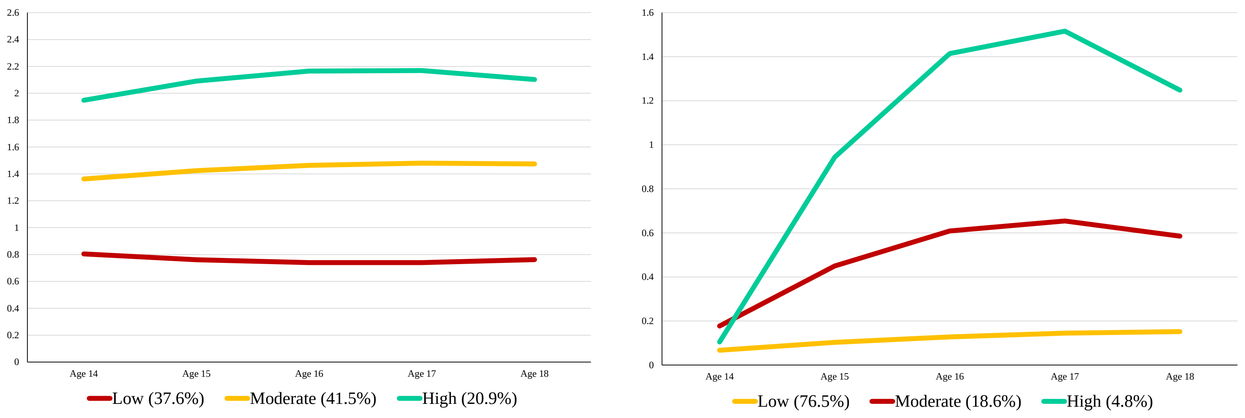

Figure 1. Trajectories for disordered eating (left) and borderline personality disorder (right)

2) Patterns of comorbidity

36% low disordered eating/low BPD features (*no symptom group*)
33% low disordered eating/moderate BPD features
10% moderate disordered eating/high BPD features
9% moderate disordered eating/moderate BPD features
7% low disordered eating/high BPD features
3% high disordered eating/high BPD features (*high comorbidity group*)
1% high disordered eating/moderate BPD features group
1% moderate disordered eating/low BPD features

3) Temporal precedence

High disordered eating → high BPD features = 0·83
High BPD features → high disordered eating = 0·17
Moderate disordered eating to high BPD features = 0·57
Moderate BPD features → high disordered eating = 0·61

4) Risk factors

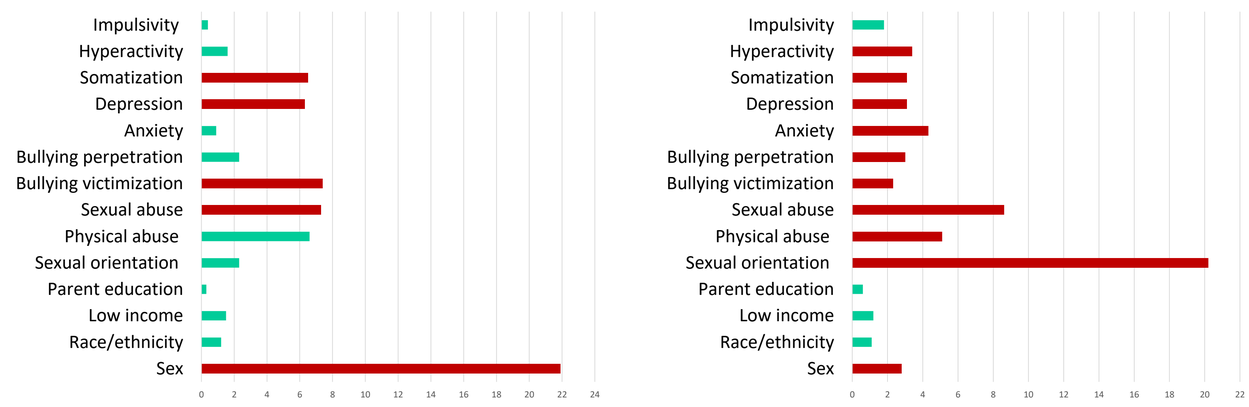

Figure 2. Adjusted odds ratios (ORa) for disordered eating (left) and borderline personality disorder (right). Red bars are statistically significant ORa.

5) Population attributable fractions

Eliminating bullying victimization would have the largest impact on incidence reduction; keeping all other exposures constant and eradicating bullying victimization would prevent new cases of eating disorders by 66% and BPD by 37%.

KEY POINTS

1) The prevalence rates for clinically significant disordered eating (high symptom trajectory group = 5%) mapped on to rates in clinical settings, while the prevalence of clinically significant BPD features (high symptom trajectory group = 21%) was higher.
2) Approximately one quarter of the total sample reported comorbid symptoms.
3) High levels of disordered eating were a stronger indicator of high levels of BPD features than was the reverse. The clinical implications are that treatment for disordered eating should be prioritised in cases of comorbidity.
4) Non-modifiable risk factors were the strongest predictors of belonging to the high symptom trajectory groups (girls and sexual minorities). Bullying perpetration and hyperactivity were unique to BPD features.
5) The burden of expected clinical cases of eating disorders and BPD could be reduced substantially by eliminating bullying victimization.

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